

# Notice of Allowability

Application No.

10/733,764

Examiner

Carlos A. Martinez

Applicant(s)

HINTERMANN, KILIAN

Art Unit

2853

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed through 08/10/2006.
2. ☒ The allowed claim(s) is/are 7 and 8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance of claims 7 and 8:

With respect to claim 7, the prior art does not teach a method for digital printing, in particular comprising a printing device in several colours, the printing device comprising a multitude of print head devices (clusters) which can be moved in a first direction (X) over the material to be printed, in each case with a multitude of arrangements of piezotechnical printing elements in one line (jetting assemblies), arranged side-by-side, and at least one UV light-source arrangement (130, 132, 134) to the side of the moveable print head devices (clusters) for admitting UV light to ink which cures by exposure to UV light, wherein the alignment (Y) of each arrangement is essentially in vertical direction, in which the print head devices (clusters) are movable (X); in each of the print head devices (clusters) the arrangements, that are arranged side-by-side, of printing elements in one line (jetting assemblies) are in each case offset by a micro-step in the direction (Y) of the line; the UV light-source arrangement (130, 132, 134), of which there is at least one, is movable together with the print head devices (clusters); the UV light-source arrangement (130, 132, 134), of which there is at least one, is designed such that it is suitable for partially curing the ink without completely curing it; and furthermore, the printing device comprises a further UV-curing light-source arrangement (136) for curing the ink; wherein printing in each selected colour is carried out in the following steps: (A) selective printing of selected dots in a first matrix of dots in the selected colour, which dots are spaced apart by a distance which exceeds the dot size, by means of the print head lines of the first print half, which

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print head lines are located side by side between two UV light-sources; (B) partial curing of the print droplets by means of a middle UV light-source (132); (C) selective printing of selected dots of a second matrix of intermediate dots in X-direction with the parallel print heads of the other print half, in each case using the same colour; (D) partial curing of these intermediate dots, using a first outer UV light-source (130); (E) advancing the material to be printed in Y-direction by half the length of the distance between the jets within a jet head line; (F) selective printing of selected dots of a third matrix of intermediate dots, in relation to the first or second matrix, in Y-direction in the selected colour, using the print heads of the second print half; (G) partial curing of the print droplets by means of the middle UV light-source (132); (H) selective printing of selected dots of a fourth matrix of intermediate dots in X-direction, in relation to the third matrix, in the selected colour, using the print heads of the first print half; (I) partial curing of these intermediate dots, using a second outer UV light-source (134); (J) advancing the material by the length of a print head line; (K) repeating steps (A) to (I) until the print image is generated on the material in the selected colour; and (L) curing all the dots, using a curing UV light-source (136); wherein printing takes place according to steps (A) to (I), at first in a first colour, and then at each repeat step (K) printing is added in a further colour, until print as been applied in all colours.

With respect to claim 8, claim 8 is allowable since it depends on an allowable independent claim (claim 7).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos A. Martinez whose telephone number is (571) 272-8349. The examiner can normally be reached on 8:30 am - 5:00 pm (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CAM  
08/17/2006

  
HAI PHAM  
PRIMARY EXAMINER